

5 WHAT IS CLAIMED IS:

1. A method for treatment of neurodegenerative conditions and effects of aging, including autoimmune conditions and fibromyalgia, said method comprising the steps of:

administering to a patient a compound effective for increasing neuronal  
metabolism of histamine to a histamine H2 agonist, in an amount sufficient that said  
histamine H2 agonist is produced in an amount adequate to stimulate production of cyclic  
AMP at a level which maintains myelin against undergoing self-degeneration.

2. The method of claim 1, further comprising the step of:

selecting said compound from the group consisting of:

histamine N-methyltransferase;  
monamine oxidase A;  
monoamine oxidase-A agonists;  
monoamine oxidase-B inhibitors;  
histamine H3 antagonists; and  
iron chelating agents.

3. The method of claim 2, wherein said compound is histamine N-methyltransferase, and wherein the step of administering said compound comprises:

administering histamine N-methyltransferase to said patient so as to increase  
neuronal metabolism of histamine to tele-methylhistamine.

4. The method of claim 3, wherein the step of administering histamine N-methyltransferase comprises:

administering isolated histamine N-methyltransferase by injection.

5. The method of claim 2, wherein said compound is monoamine oxidase-A, and wherein the step of administering said compound comprises:

administering monoamine oxidase-A to said patient so as to increase neuronal  
metabolism of tele-methylhistamine to 4-methylhistamine.

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6. The method of claim 2, wherein said compound is a monoamine oxidase-B inhibitor, and wherein the step of administering said compound comprises:

10 administering said monoamine oxidase-B inhibitor to said patient so as to increase the activity ratio of monoamine oxidase-A to monoamine oxidase-B and thereby increase neuronal metabolism of tele-methylhistamine to 4-methylhistamine.

7. The method of claim 6, wherein said monoamine oxidase-B inhibitor is selegiline hydrochloride.

15 8. The method of claim 2, wherein the compound is a histamine H3 antagonist, and wherein the step of administering said compound comprises:

administering said histamine H3 antagonist to said patient so as to inhibit neuronal metabolism of tele-methylhistamine to R-alpha-methylhistamine and thereby increase neuronal metabolism of tele-methylhistamine to 4-methylhistamine.

20 9. The method of claim 8, wherein said histamine H3 antagonist is thioperamide maleate.

25 10. The method of claim 2, wherein said compound is an iron chelating agent, and wherein the step of administering the compound comprises:

administering said iron chelating agent to said patient so as to reduce the presence of a predetermined iron constituent and thereby reduce peroxidation-induced inhibition of neuronal metabolism of histamine to tele-methylhistamine.

30 11. The method of claim 10, wherein said iron chelating agent is deferoxamine mesylate.

12. The method of claim 11, wherein the step of administering said iron chelating agent comprises:

5 administering said deferoxamine mesylate in the range from about 500 mg-1 g IM per day.

13. The method of claim 11, wherein the step of administering said iron chelating agent comprises:

10 administering said deferoxamine mesylate in the range from about 20-40 mg/kg S.C. per day.

14. The method of claim 2, wherein said compound is a monoamine oxidase-A agonist, and wherein the step of administering said compound comprises:

15 administering said monoamine oxidase-A agonist to said patient so as to increase neuronal metabolism of tele-methylhistamine to 4-methylhistamine.

16. The method of claim 15, wherein said monoamine oxidase-A agonist is reserpine.

17. The method of claim 16, wherein the step of administering said monoamine oxidase-A agonist comprises:

administering reserpine by slow-release transdermal dose.

18. The method of claim 16, wherein the step of administering said monoamine oxidase-A agonist comprises:

administering reserpine by injection in the range from about 1-10 mg/kg S.C. per day.